

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act,
as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

The Town of Ashland, New Hampshire

is authorized to discharge from the Wastewater Treatment Plant
located at

Collins Street
Ashland, New Hampshire 03217

to receiving water named

Squam River (Hydrologic Basin Code: 01070001)

in accordance with effluent limitations, monitoring requirements
and other conditions set forth herein.

This permit shall become effective forty-five (45) days from
the date of issuance.

This permit and the authorization to discharge expire at
midnight, five (5) years from the effective date. This permit
supersedes the permit issued on September 30, 1991.

This permit consists of: 14 pages in Part I, including
effluent limitations, monitoring requirements, etc.; 10 pages in
Attachment A: "Freshwater Chronic Toxicity Test Procedure and
Protocol"; 72 pages in Sludge Compliance Guidance; and 35 pages in
Part II including General Conditions and Definitions.

Signed this 30th day of March, 2000

/signature on file/
Linda M. Murphy

Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency (EPA)
Region I
Boston, Massachusetts

PART I.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge treated waste waters (sanitary, commercial, and industrial) from outfall Serial Number 001 into the Squam River. Such discharges shall be limited and monitored by the permittee as specified below. Samples specified below shall be taken at a location that provides a representative analysis of the effluent.

| <u>Effluent</u> <u>Characteristic</u> | <u>Discharge Limitations</u> | | | <u>Discharge Limitations</u> <u>Monitoring Requirements</u> | | | | |
|--|------------------------------|---------------|--------------|--|----------------|---------------|----------------------------------|-------------|
| | Average | Average | Maximum | Average | Average | Maximum | | |
| | <u>Monthly</u> | <u>Weekly</u> | <u>Daily</u> | <u>Monthly</u> | <u>Weekly</u> | <u>Daily</u> | Measurement Sample | |
| | lbs/day | lbs/day | lbs/day | (Units specified) | | | <u>Frequency</u> | <u>Type</u> |
| Flow ^{1,2} | --- | --- | --- | 1.6 mgd | --- | | Report Continuous Recorder | |
| BOD ³ | 400 | 600 | 667 | 30 mg/l | 45 mg/l | 50 mg/l | 1/Week ab | Gr |
| TSS ³ | 400 | 600 | 667 | 30 mg/l | 45 mg/l | 50 mg/l | 1/Week Grab | |
| pH Range ⁴ | | | | 6.5 to 8.0 | Standard Units | (See I.E.1.a) | 1 / Day Grab | |
| <u>Escherichia coli</u> ⁵ ; Colonies/100 ml | | | | 126 | --- | 406 | 3 / Week Grab | |
| Total Residual Chlorine ⁶ ; mg/l | | | | 0.113 | --- | 0.196 | 1 / Day Grab | |
| Total Recoverable and Dissolved Copper ⁷ ; mg/l | | | | Report | --- | Report | 2 / Month | |
| Color ⁸ ; ADMI units | | | | Report | --- | Report | Grab 2 / Month | |

| | | | | |
|--|-----|-----|--------|----------|
| Whole Effluent Toxicity | | | | Grab |
| LC ₅₀ ^{9,10,11} ; Percent | --- | --- | 100 | 4 / Year |
| | | | | Grab |
| C-NOEC ^{10,11,12} ; Percent | --- | --- | ≥9.7 | 4 / Year |
| | | | | Grab |
| Ammonia Nitrogen as Nitrogen; mg/l ¹³ | | --- | --- | Report |
| | | | | 4 / |
| | | | | year |
| Hardness; mg/l ¹³ | --- | --- | Report | Grab |
| | | | | 4 / Year |
| | | | | Grab |
| Total Recoverable Aluminum; mg/l ¹³ | --- | --- | Report | 4 / Year |
| | | | | Grab |
| Total Recoverable Cadmium; mg/l ¹³ | --- | --- | Report | 4 / Year |
| | | | | Grab |
| Total Recoverable Chromium; mg/l ¹³ | --- | --- | Report | 4 / Year |
| | | | | Grab |
| Total Recoverable Nickel; mg/l ¹³ | --- | --- | Report | 4 / Year |
| | | | | Grab |
| Total Recoverable Lead; mg/l ¹³ | --- | --- | Report | 4 / Year |
| | | | | Grab |
| Total Recoverable Zinc; mg/l ¹³ | --- | --- | Report | 4 / Year |
| | | | | Grab |

See pages 3 through 6 for explanation of superscripts.

EXPLANATION OF SUPERSCRIPTS TO PART I.A.1 on page 2:

- (1) Influent and effluent flow shall be continuously measured and recorded using a flow meter and totalizer.
- (2) For about two weeks in late June and early July, maintenance is performed at the dam upstream of Ashland's outfall. During this period, and for five days following return to normal flows, Ashland may not discharge into the Squam River. This is discussed in more detail at Part I.C. of this draft permit.
- (3) The influent concentrations of BOD₅ and TSS shall be monitored twice per month (2/Month) using a 24-Hour composite sample, and the results reported as average monthly rates. The influent concentration shall be used to calculate the percent reduction in BOD₅ and TSS.
- (4) State certification requirement.
- (5) The average monthly value for Escherichia coli shall be determined by calculating the geometric mean and the result reported. Escherichia coli shall be tested using test method 1103.1 found in Test Methods for Escherichia coli and Enterococci in Water by the Membrane Filter Procedure, EPA-600/4-85/076 as amended by test method 9213 D.3. found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent Edition(s) as approved in 40 CFR Part 136.
- (6) Total Residual Chlorine (TRC) shall be tested using Amperometric Titration or the DPD spectrophotometric methods. The EPA approved methods are found in Standard Methods for the Examination of Water and Wastewater 18th or subsequent Editions, as approved in 40 CFR Part 136, Method 4500-CL E and Method 4500-Cl G or EPA's Manual of Methods of Analysis of Water and Wastes, Method 330.5.
- (7) The following set of conditions are applicable to effluent monitoring for Total Recoverable and Dissolved Copper, but are not applicable for the metals analyses in the Whole Effluent Toxicity tests.
 - (a) For each sample analyzed, the permittee must determine the concentration of copper in its two phases (Total Recoverable and Dissolved) and report those results on the appropriate Discharge Monitoring Report.
 - (b) For purposes of reporting, the permittee shall use the "minimum level", which is the lowest concentration that can be accurately measured using a specific analytical procedure, assuming that all the method-specific sample weights, volumes, and processing steps have been

followed. When using the Furnace AA Method to analyze copper, the minimum level is a concentration of 2.5 micrograms per liter.

- (c) Any value below the minimum level of 2.5 micrograms per liter for copper shall be reported as non-detect on the Discharge Monitoring Report.
 - (d) EPA will approve alternate analytical methods at the permittee's written request, should the permittee demonstrate to EPA's satisfaction that it already utilizes equally sensitive (with the same minimum level) test methods as the Furnace AA method for copper. Such a request will be considered a minor modification to the permit.
 - (e) The permittee may partially fulfill this monitoring-only requirement when conducting a Whole Effluent Toxicity (WET) test. The permittee has the option of determining the dissolved copper fraction on the same sample for which Total Recoverable Copper is measured as part of the quarterly toxicity test.
- (8) Color samples shall be analyzed using the Colorimetric Method developed by the American Dye Manufacturing Institute (ADMI). This method is identified as 2120E in Standard Methods, and is listed as an EPA approved method in 40 C.F.R. §136, Appendix A. A sample shall be taken two times per month at a location that provides a representative analysis of the effluent at the outfall.
- (9) LC_{50} is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "100% limit" is defined as a sample which is composed of 100 percent effluent. (See Attachment A, "Freshwater Chronic Toxicity Test Procedure and Protocol".) Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no greater than a 50% mortality rate in that effluent sample. The limit is considered to be a maximum daily limit.
- (10) The permittee shall conduct chronic (and modified acute) survival and reproduction toxicity tests using the Daphnid (Ceriodaphia dubia) and shall conduct chronic (and modified acute) survival and growth toxicity tests using the Fathead minnow (Pimephales promelas) on effluent samples following the protocol in Attachment A "Freshwater Chronic Toxicity Test Procedure and Protocol". Toxicity test samples shall be collected and tests completed four times per year during the calendar quarters ending March 31st, June 30th, September 30th, and December 30th. Toxicity test results shall be submitted by the 15th day of the month following the end of the quarter

sampled. **Alternate dilution water is authorized for both whole effluent toxicity test species, in accordance with conditions set forth in Attachment A, "Freshwater Chronic Toxicity Test Procedure and Protocol" Section IV. DILUTION WATER, on page A-3.**

- (11) This permit shall be modified, or revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of the toxicity tests indicate the discharge causes any State water quality criterion to be exceeded. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 CFR §122.62(a)(2).
- (12) C-NOEC (Chronic-No Observed Effect Concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life-cycle or partial life-cycle test. This concentration should cause no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results (growth, survival, and/or reproduction) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration with no observable effect.

The C-NOEC limit of "equal to or greater than 9.7%" is defined as a sample which is composed of 9.7% (or greater) effluent, with the remainder being dilution water. This is the minimum percentage of effluent at which no chronic effects shall be observed. The limit is considered to be a maximum daily limit.

- (13) For each Whole Effluent Toxicity test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the concentrations of the Ammonia Nitrogen as Nitrogen, Hardness, and Total Recoverable Aluminum, Cadmium, Chromium, Lead, Nickel and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to have at least the Minimum Quantification Level shown in Attachment A, "Freshwater Chronic Toxicity Test Procedure and Protocol". All chemical parameter results must

(1)

be reported in the appropriate toxicity report. The permittee may use results from the Whole Effluent Toxicity test's chemical analysis for Total Recoverable Copper, in partial fulfillment of the copper monitoring requirement, as long as the permittee adheres to note 7(e), on page 4.

Continuation of A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. The discharge shall not cause a violation of the water quality standards of the receiving water.
3. The discharge shall be adequately treated to ensure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants, or which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring and would render it unsuitable for its designated uses.
4. The permittee's treatment facility shall achieve and maintain a minimum of 85 percent removal of both BOD₅ and TSS. The percent removal shall be based on a comparison of average monthly influent versus effluent concentrations.
5. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the 1.6 MGD design flow, or 1.28 MGD, the permittee shall submit to the permitting authorities a projection of loadings, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.
6. A User may not introduce into any Publicly Owned Treatment Works (POTWs) any pollutant(s) which cause Pass Through or Interference. The terms User, Pass Through and Interference are defined in 40 CFR §403.3.
7. All POTWs must provide adequate notice to both EPA and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) of the following:
 - a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category (see 40 CFR §122 Appendix A as amended) discharging process water; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source

introducing pollutants into the POTW at the time of issuance of the permit.

- c. For purposes of this paragraph, adequate notice shall include information on:
 - (1) the quantity and quality of effluent introduced into the POTW; and
 - (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- 8. Pollutants introduced into POTW's by a non-domestic source (industrial user) shall not pass through the POTW or interfere with the operation or performance of the POTW.
- 9. The permittee shall submit to EPA and NHDES-WD the name of any Industrial User subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N who commences discharge to the POTW after the effective date of this permit. This reporting requirement also applies to any other Industrial User that discharges an average of 25,000 gallons per day or more of process wastewater into the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW; or is determined by the POTW to have a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR §403.8(f)(6) and 40 CFR §403.12(a)).
- 10. In the event that the permittee receives reports (baseline monitoring reports, 90-day compliance reports, periodic reports on continued compliance, etc.) from Industrial Users subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N, the permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA and NHDES-WD.
- 11. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.

B. SLUDGE CONDITIONS

- 1. The permittee shall comply with all existing federal & state laws and regulations that apply to sewage sludge use and

disposal practices and with the Clean Water Act, Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state or federal (40 CFR part 503), requirements.
3. The requirements and technical standards of 40 CFR part 503 apply to facilities which perform one or more of the following use or disposal practices.
 - a. Land application - the use of sewage sludge to condition or fertilize the soil.
 - b. Surface disposal - the placement of sewage sludge in a sludge only landfill.
 - c. Placement of sludge in a municipal solid waste landfill.
 - d. Sewage sludge incineration in a sewage sludge incinerator
4. The 40 CFR part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (lagoons- reed beds), or are otherwise excluded under 40 CFR 503.6.
5. The permittee shall use and comply with the attached compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements.

General requirements

Pollutant limitations

Operational Standards (pathogen reduction requirements and
vector attraction reduction requirements

Management practices

Record keeping

Monitoring

Reporting

Depending upon the quality of material produced by a facility all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year

| | |
|---------------------------|-----------|
| less than 290 | 1/Year |
| 290 to less than 1,500 | 1/Quarter |
| 1,500 to less than 15,000 | 6/Year |
| 15,000 + | 1/Month |

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR §503.8.
8. The permittee shall submit an annual report containing the information specified in the guidance. Reports are due annually by February 19th. Reports shall be submitted to both EPA and the New Hampshire Department of Environmental Services - Water Division at the addresses contained in the reporting section of the permit.

C. SCHEDULE FOR STORAGE, AND JUNE AND JULY DISCHARGE REQUIREMENT

1. The permittee shall notify EPA and the NHDES-WD in writing by May 15th of each year that the available storage capacity in the four lagoons as of June 15th will be adequate to store the discharge from outfall 001 during the period defined in paragraph C.3, below. In the event that adequate storage will not be available by June 15th, the permittee shall include in the notification the plan required by paragraph C.3. (For addresses, see Section D. below.)
2. The permittee's plan shall include the steps necessary to achieve adequate storage in the lagoons by June 15th in order to maintain a zero discharge from outfall 001 during the June and July period identified in Paragraph C.4. Drawdown for this storage shall be accomplished gradually and the maximum daily discharge shall not exceed the design flow of 1.6 MGD to achieve the required storage capacity.
3. The June and July period begins in late June on the day when the outflow from Little Squam Lake is reduced, and ends five days following the return of the normal flow pattern in the Squam River, as measured at the U.S. Geological Survey gaging station at Ashland.
4. Information concerning flow management of the Squam River is available from the New Hampshire Department of Environmental Services, Water Division. The contact at time of permit issuance is Jim Gallagher, at (603) 271-3406.
5. Discharge from outfall 001 shall be zero during the June and July period identified in Paragraph C.4.

D. MONITORING AND REPORTING

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period.

Signed and Dated original DMRs and all other reports required herein, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Duplicate signed copies of all reports required herein shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
6 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

E. STATE PERMIT CONDITIONS

1. The permittee shall comply with the following conditions which are included as State Certification requirements.
 - a. The pH range of 6.5-8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR §133.102(c).
 - b. Pursuant to State Law NH RSA 485-A:13 and the New Hampshire Code of Administrative Rules, Env-Ws 405.04(b), submission shall be made to the NHDES-WD, of a Discharge Permit Request form by a municipality proposing to accept into its POTW (including sewers and interceptors):
 1. any increase in industrial wastewater flow, pollutant characteristics or pollutant concentration; or

2. any increase in sanitary wastewater flow of 5,000 gallons per day, or more.
- c. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).
- d. Any modifications of the Permittee's Sewer-Use Ordinance, including local limitations on pollutant concentrations, shall be submitted to the NHDES-WD for approval prior to adoption by the permittee.
- e. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer-use ordinance and a copy of any other document granting legal authority to issue permits to industries discharging industrial waste to the municipal wastewater treatment plant.
- f. Within 120 days of the effective date of this permit, the permittee shall submit to NHDES-WD a current list of all industries discharging industrial waste to the municipal wastewater treatment plant. At a minimum, the list shall indicate the name and address of each industry, along with the following information: telephone number, contact person, facility description, production quantity, products manufactured, industrial processes used, chemicals used in processes, existing level of pretreatment, and list of existing discharge permits.

- g. Within 270 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of discharge permit(s) issued to each industry discharging industrial waste to the municipal wastewater treatment plant. At a minimum, each permit shall contain the following: effective dates; flow and applicable pollutant limits; self-monitoring, reporting, compliance monitoring and inspection provisions; and enforcement criteria. If industrial permitting authority does not exist as of the effective date of this permit, the permittee is requested to submit to the NHDES-WD a proposed plan and implementation schedule for adopting such authority and implementing an industrial permitting system.
2. This NPDES Discharge Permit is issued by the EPA under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

F. SPECIAL CONDITIONS

Whole Effluent Toxicity Test Frequency Adjustment

The permittee may submit a written request to the EPA requesting a reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of the most recent four (4) successive toxicity tests of effluent, all of which must be valid tests and must demonstrate compliance with the permit limits for whole effluent toxicity. Until written notice is received by certified mail from the EPA indicating that the Whole Effluent Testing requirement has been changed, the permittee is required to continue testing at the frequency specified in the respective permit.

pH Limit Adjustment

The permittee may submit a written request to the EPA requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 CFR Part 133) for this facility. The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

G. REOPENER CLAUSE

This permit may be modified to incorporate additional color monitoring or color limit(s) if the results of the color monitoring required by this permit indicate the discharge causes or contributes to an exceedance of the State's Water Quality criteria for color. Results of the color monitoring would be considered "New Information" and the permit can be modified as provided in 40 CFR §122.62(a)(2).